

ABSTRACT

The antenna is a device used for radiated or receive radio waves, or as an intermediary channel transmission and air. Wide band antenna is important for multi-channel radio system. Since 2003 until mid-2008 has produced some models of antenna with 3.41 dBi – wide band, ultra wide band, and multi-band in the region 300 MHz - 3000 MHz based on matching – wide band for Dwitunggal with terminal 50Ω unbalance. The driven is monokupu.

This final project designed and made Dwitunggal Binomial Two Strip Antenna at 300 MHz–3000 MHz with SMA Connector. The antenna consist of two parallel strips which were interpolated by the dielectric substances. The Binomial Transformation is a kind of $\lambda/4$ transformation that used for wide band. This work of frequency antenna between 300 MHz-3000 MHz at $VSWR \leq 1.5$, gain ≥ 3.41 dBi, unidirectional, and linear polarization.

With parallel twin strip principle, construction material compotion and each dimation are obtained are $N = 39$ stages, wearing parallel two brass strips with width (w) = 1 cm, length (l) = 98 cm, space (s) = 5 cm. This antenna has a driven and the driven is monokupu was built from brass with 45 angle and height 4.84 cm and has a reflector with length 10 cm and width 6 cm.

From measurement, some results are obtained are $VSWR \leq 1.5$ with operation frequency from 740.22 MHz – 2712.02 MHz, gain 8.146 dBi at 1400 MHz, unidirectional radiation pattern, and ellips polarization.

Keyword : Dwitunggal Antenna, $\frac{\lambda}{4}$ Transformation Binomial, Monokupu, Unidirectional